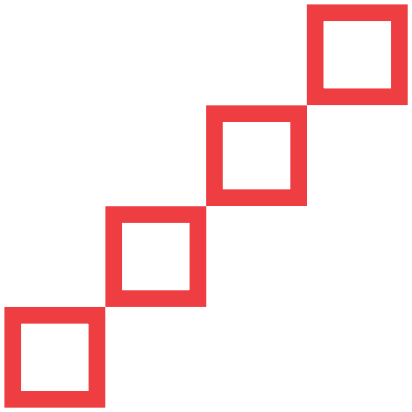


SUMMARY

1. This paper summarises the evidence underpinning the work to develop the national skills strategy for England. Some of the issues raised are already being addressed within existing policy proposals. This paper is intended to explain the rationale and evidence underpinning the Skills Strategy Progress Report, which is being published in parallel.

2. The key messages in the report are:

   - Skills have an important role to play in increasing productivity alongside other factors such as innovation, enterprise, competition and investment. For individuals, skills are a route to stable employment, better wages, and long-term prosperity, as well as to personal development.

   - But workforce skills are lower in Britain than other countries. The principal skill gaps are in the base of general skills, intermediate skills, maths and engineering, and management.

   - The cause is as much the lack of demand by employers for skills as it is a problem with skill supply. Employer demand for skills is derived from the business approach or strategy adopted. The issue therefore is why there are not more employers moving to higher value added business strategies. Reasons include a vicious circle of low skills, low wages, and consumer demand for cheap products and services. This is combined with low employer ambition in some parts and management skill deficiency.

   - Within this wider set of skills issues (and the need to support lifelong learning), there is a particular need for Government to assist adults who have not achieved a level 2 qualification, and who therefore lack the platform of skills needed for ongoing employability. The annex sets out the qualifications included in each NVQ level.

   - The skills gap is caused by a mix of factors:

     - Externalities have an effect across the whole economy (although evidence in this area is difficult to collect).

     - There are also benefits from training that are shared within

sectors, and specific sectors that experience low skill equilibrium.

- People with existing low skill levels and employees of small firms experience more severe access barriers to training, skills and qualifications (due to cost, motivation, information and credit failures).

- Areas for which the Government is responsible also need to be improved to promote learning take-up - the quality of information provision, the articulation of vocational learning pathways, and provider quality frameworks.

- The interventions to be announced in the Skills Strategy will need to address these factors.

THE IMPORTANCE OF SKILLS FOR PRODUCTIVITY AND EARNINGS

3. The overall objective of the skills strategy is to contribute towards raising productivity and competitiveness, by creating a more highly skilled, more productive workforce. (See the Progress Report for the vision and purpose of the Skills Strategy). This reflects the fact that skills are not an end in their own right, but rather one contribution to a wider goal. Productivity is a key determinant of economic performance and living standards. The Government's long-term goal is that Britain will achieve a faster rate of productivity growth than its main competitors, closing the productivity gap. Other factors such as the level and use of innovation, or the level of capital investment, are also critical in improving productivity.

4. This section explores the value of skills in achieving the wider goals of productivity and individual earnings.

Investment in skills improves productivity

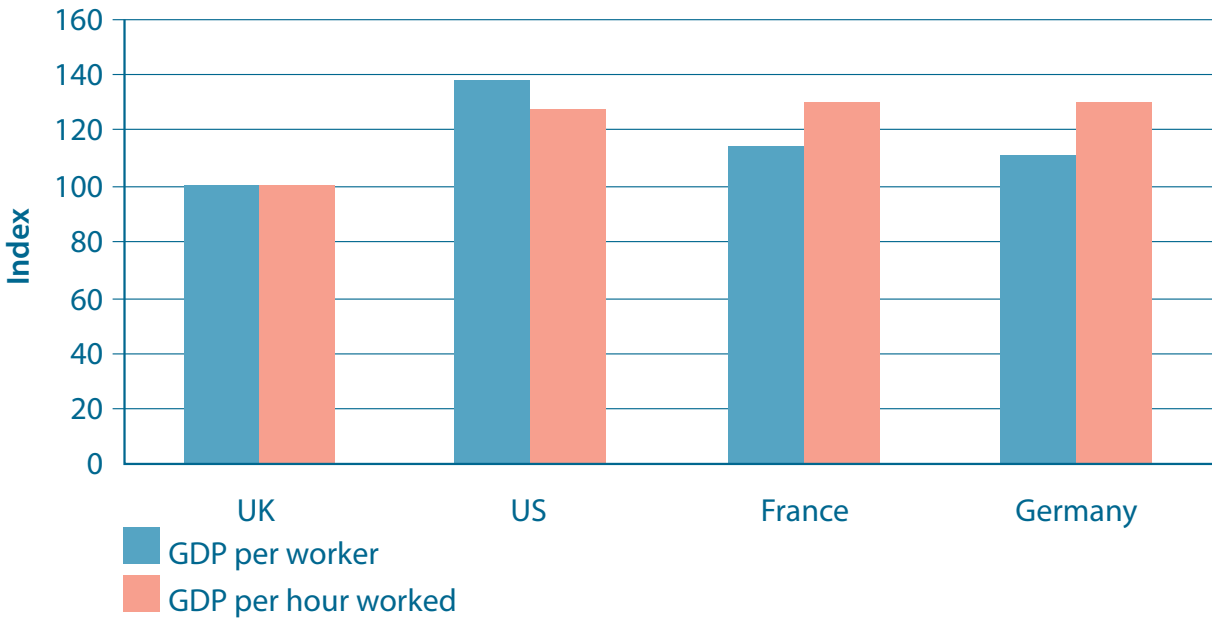
5. In its June 2001 report Productivity in the UK, the Treasury identified workforce skills as one of the five drivers of productivity. The other drivers of productivity are innovation, enterprise, investment, and competition.

6. There remains a significant productivity gap between Britain and its main competitors. The gap with Germany and the US has remained at

around the same level. Output per hour worked is around 30% higher in the US, France and Germany than in the UK. Up to a fifth of the gap with Germany and France is a direct consequence of lower skill levels in the UK, with skills playing an indirect part in much of the remaining gap. For example capital investment relies on workforce skills for its effective use, and innovation is an expression of workforce skills.

7. NIESR's "matched plant" work compares UK businesses with similar firms in competitor countries. All the studies found that higher average levels of labour productivity in continental European plants were closely related to the greater skills and knowledge of their workforces. Lower skills levels in the UK were found to have a negative effect directly on labour productivity and on the types of machinery chosen, the ways in which machinery was modified in line with particular needs,

CHART 1: Productivity Gap 2001 (UK = 100)



(Source: O'Mahoney and deBoer 2002)

the smoothness of machinery running, and the introduction of new technology. A study of the hotels sector suggested similar lower productivity in services (Prais et al 1989).

8. A survey undertaken by Gallup in 1993 estimated that basic skills problems cost the British economy more than £4.8 billion a year, as a result of poor quality control, lost orders, bad communication, and the need to recruit employees externally due to poor skills amongst the existing workforce.

9. Employers themselves perceive a link between training and labour productivity. In the Learning and Training At Work Survey 2002, 23% of employers said that training lead to a large increase in labour productivity, and a further 42% said that it lead to a small increase. Larger employers were more likely to perceive a large increase in labour productivity arising from training (28% for employers of size 500+), as were employers in transport and public administration (26%), and distribution and consumer services (24%). The industries where the lowest percentage of employers perceived a large increase in labour productivity arising from training were in agriculture, mining, utilities and construction (13%), and manufacturing (19%).

   Theoretically, it is the case that the higher the level the skill, the greater the impact on productivity. If skilled individuals add to firms' productivity through efficiency enhancement and value creation, then they should be rewarded through higher earnings. However, in practice a range of factors - such as unobservability of effort, or non-wage remuneration - mean that earnings provide an imperfect proxy for the effect of skills on productivity.

Investment in skills increases earnings

10. Over the last 20 to 30 years (and probably for longer) the earnings differential for people with qualifications has remained high. This is despite the steady increase in the number of people with qualifications. This implies that the demand for skills is increasing over time, so that the increasing supply is only just keeping pace.

11. The table below show wage premia associated with different qualification levels. The wage premia are additive, so that, for example, a man with O levels/higher GCSEs and A levels will earn 38% more than a man with no qualifications. The wage premium for academic qualifications is consistently higher than vocational qualifications of the same level, with the greatest difference at levels 1 and 2. And on the vocational side, the qualifications with the strictest vocational focus (NVQs) have the poorest wage premium (in comparison to City & Guilds or ONCs/ONDs). The Employer Skill Survey investigated employers' need for generic skills (Hillage et al 2002). It found that, where skill shortages vacancies are reported for low skill jobs, over half of such vacancies require only general skills, whereas only around 10% of vacancies require purely technical skills. The primary demand appears to be for general skills, particularly at low skill levels.

TABLE 1: Wage premium (%) from obtaining qualifications, Labour Force Survey

	NVQ level	Men	Women
Academic qualifications			
O level/higher GCSEs	2	21	19
A level	3	17	19
First degree	5	28	25
Vocational qualifications			
Level 1/2 NVQs	1/2	ns	ns
Level 3-5 NVQs	3-5	6	5
ONC/OND or TEC/BEC national	3	10	8
HNC/HND or TEC/BEC higher	4	15	9
Professional qualifications	5	35	41

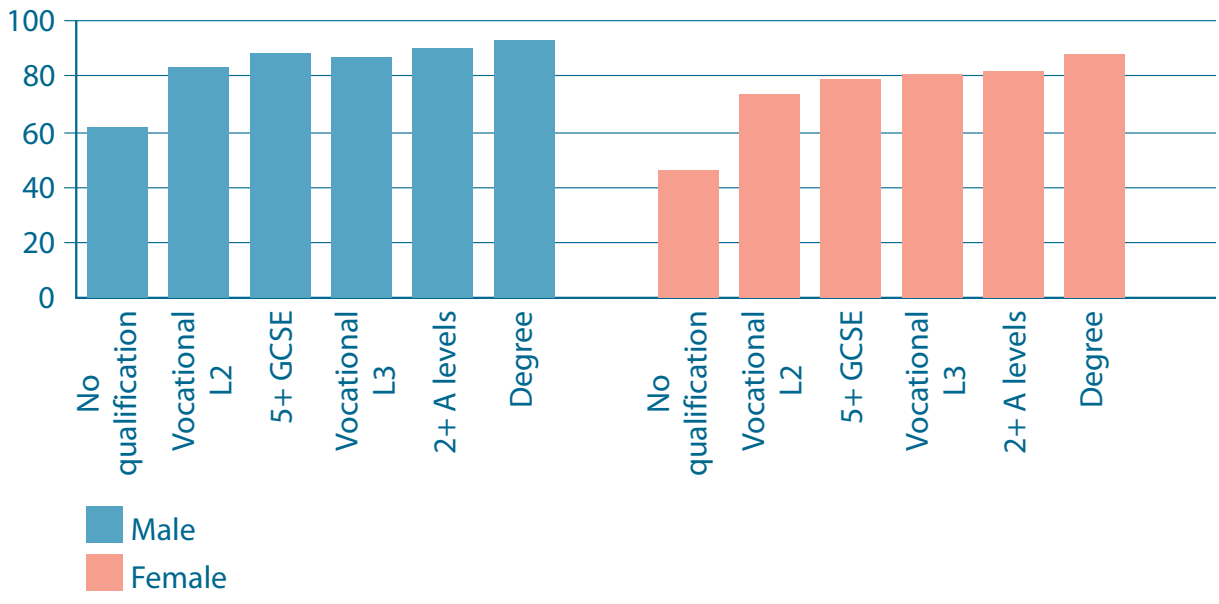
(Source: Table 6.31, Dearden et. al. (2000); ns = not statistically significant)

12. Also note that the returns to better numeracy skills are estimated to be between 6% and 10% of earnings and the returns to better literacy skills are around 1% - 6% (Dearden et al (2000), Bynner et al (2000)).

13. The charts below provide more details on the importance of qualifications for earnings and employment effects. Level 2 represents a significant step in employment rates over those holding no qualifications. But earnings gains at level 2 are only noticeable for 5+ GCSEs (i.e. academic qualifications). At level 3, there is a small employment gain, and a reasonable earnings gain, especially for academic qualifications.

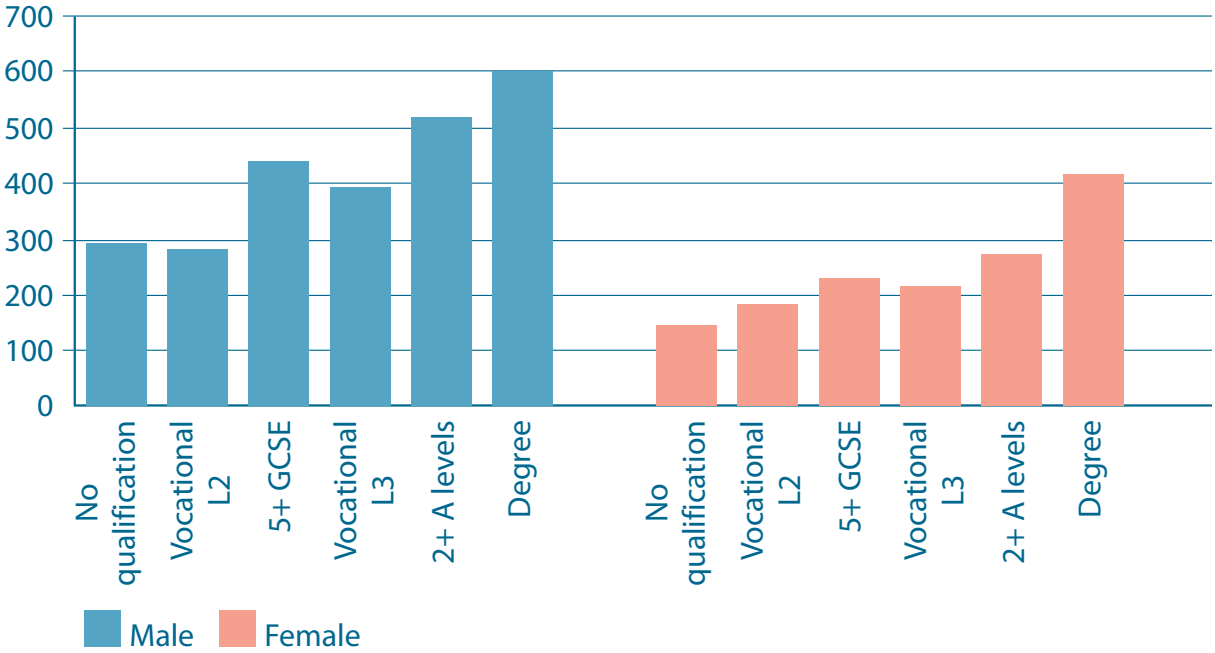
14. These findings are discussed below in the section "evidence on priorities for public funding of adult learning". It is important to emphasise that the figures in charts are highly aggregated. So although there is no discernable positive impact on earnings from vocational level 2 qualifications on average, the LSC gives us some grounds for confidence that a well-designed Level 2 qualification, implemented in favourable circumstances, can add substantial value.

CHART 2: Employment rates by qualification level by gender



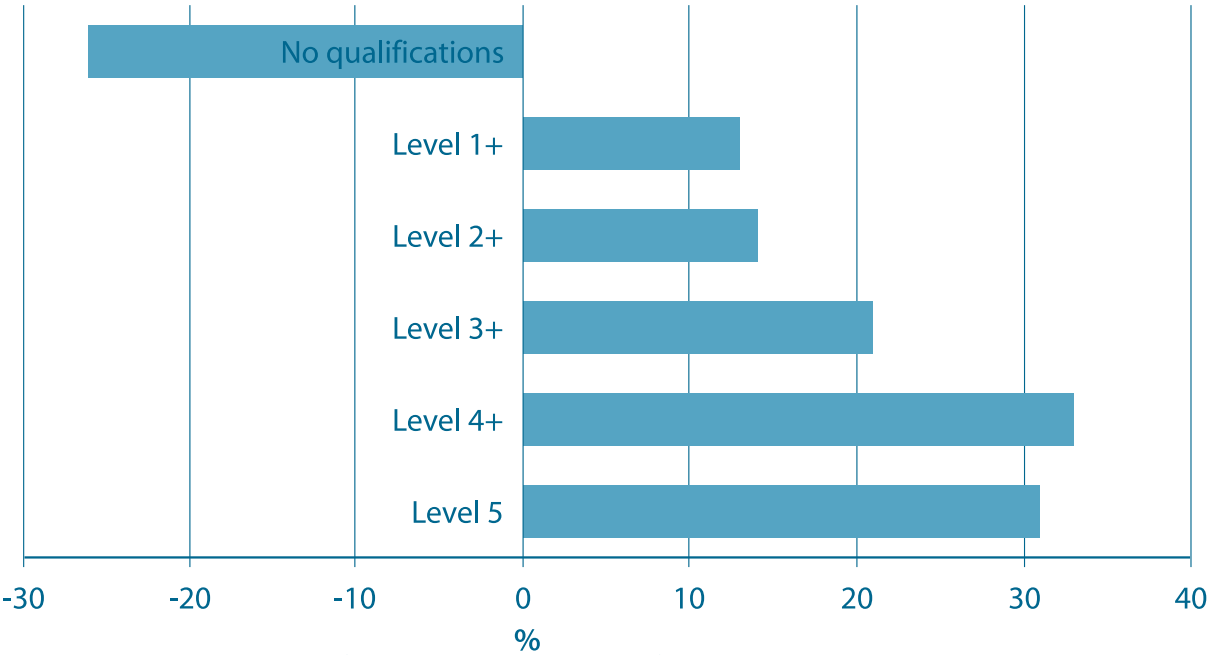
(Source: LFS, Spring 2001. All working age people not in fulltime education).

CHART 3: Gross weekly earnings by qualification level by gender



(Source: LFS, Spring 2001. All working age people not in fulltime education)

CHART 4: Employment by highest qualification level, 1999 to 2010



(Source: IER Projections of occupations and qualifications 2000/01)

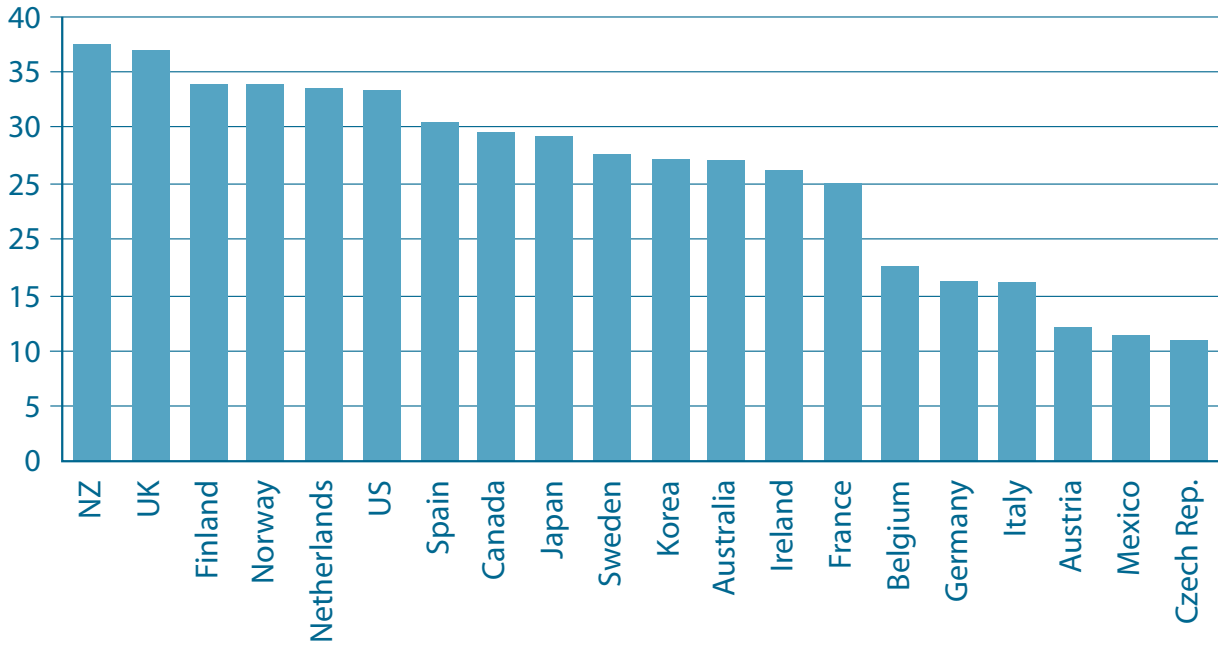
15. Finally, projections of changing skill demands over the next 10 years suggest that the risk of exclusion for those with no or low qualifications is going to get worse. Chart 4 shows the projected trends, with declining proportions of low/no skill jobs, and increasing projections of high skill jobs.

THE PATTERN OF SUPPLY AND DEMAND FOR SKILLS IN ENGLAND

There are gaps in the supply of skills

16. OECD evidence shows that the UK performs reasonably well on basic skills for most young people, with average test scores at age 15 in reading, maths, and science all above those of Germany, France and the US. Similarly, the chart below shows that the graduation rates for first degrees are some of the highest in the OECD.

CHART 5: First degree graduation rates 1999

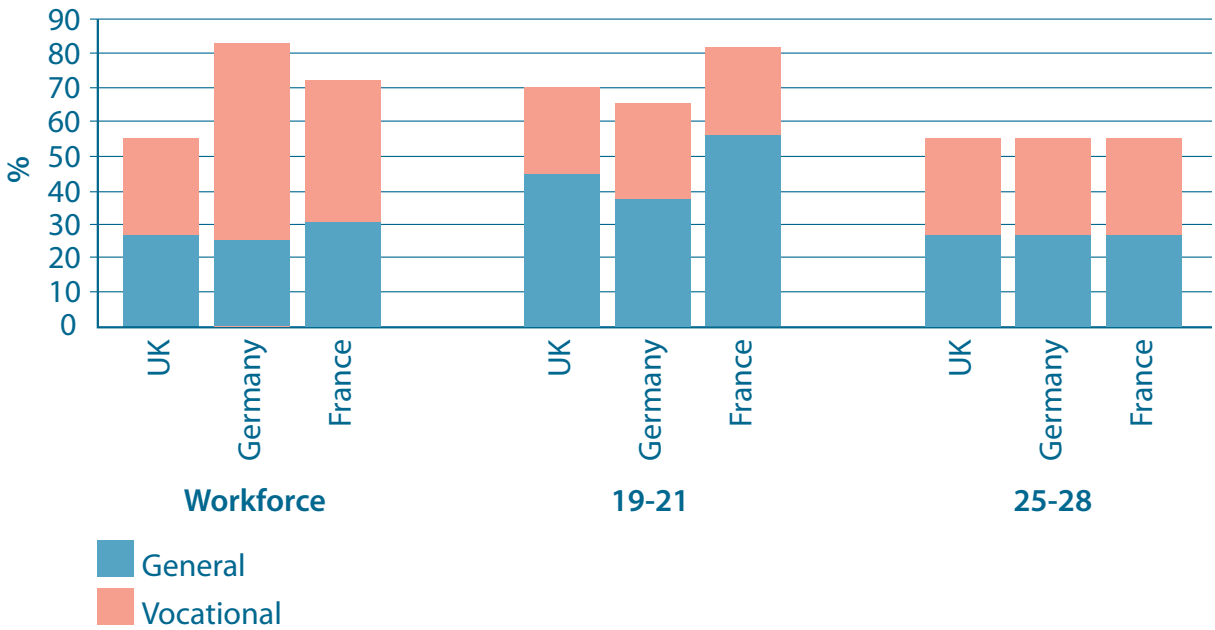


(Source: OECD Programme for international student assessment, 2000)

17. However, it is not sufficient to take account only of the output of initial education for young people. A gap emerges in the 25-28 year old age group – the result of different apprenticeship pathways in the UK, France and Germany.

18. To compound this, the UK has a long tail of underperformers. Among older people (aged 45-54) the UK is reported as being 15th among 30 countries (having 61% with qualifications at level 2 or above, compared with 60% in all OECD countries) (OECD 2002). Among people aged 25-34 the UK has dropped to 22nd position, falling further behind the leading countries. Chart 7 below shows the attainment of level 2 qualifications in the UK compared to

CHART 6: Proportion of the workforce with level 2+ qualifications, by type of qualification



(Source: Skills Task Force 2000)

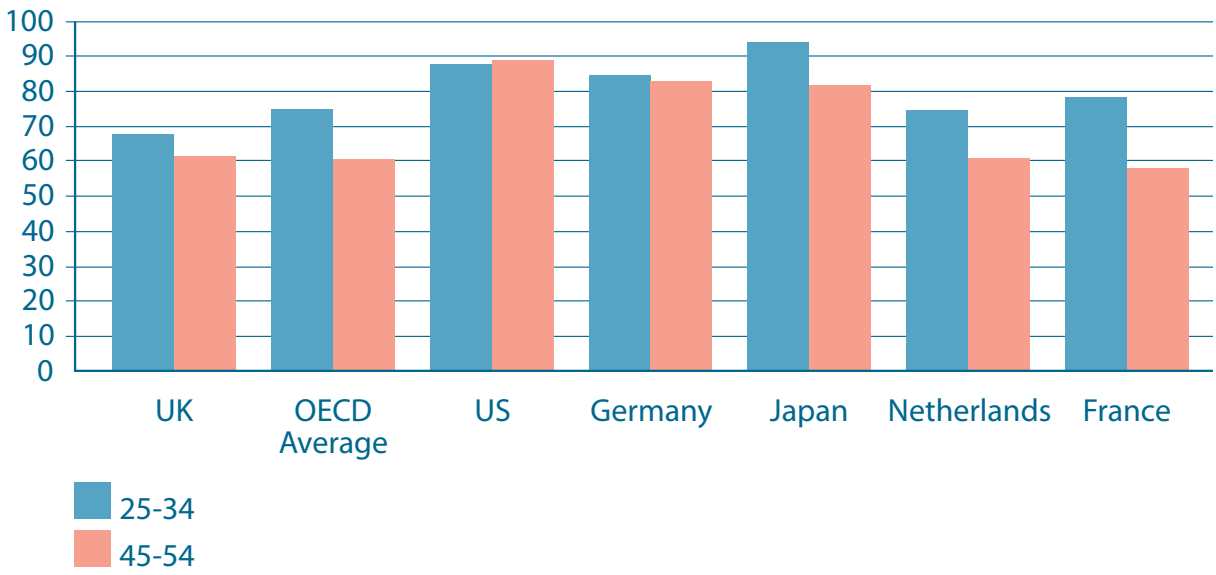
other countries. This gap in basic skills is reflected in earnings. While the top 40% of earners in Britain have similar earnings to those in Germany, the earnings for those in the bottom 40% are only two thirds as high in the UK as in Germany (Layard, et al 2002).

19. In summary, Table 2 overleaf shows that the UK workforce neither achieves the higher education rates of the US, or the level of intermediate skills in France and Germany.

20. The skills gaps described above can be broken down into three main areas of concern for England:

    a. The base of general skills: Around 20% of adults in England have difficulties with functional literacy

CHART 7: Proportion of the population that has attained at least upper secondary education (level 2) by age group (2001)



(Source: OECD 2002, Education at a Glance)

TABLE 2: Qualification levels of the workforce, 1999

	% of the workforce with qualifications at levels:		
	Higher	**Intermediate**	**Lower**
UK	15.4	27.7	56.9
USA	27.7	18.6	53.7
France	16.4	51.2	32.4
Germany	15.0	65.0	20.0

(Source: O'Mahoney and deBoer (2002))

and numeracy, defined as "the ability to read, write and speak in English, and to use mathematics at a level necessary to function at work and in society in general". And 31% of the working population do not have level 2 qualifications. (See the annex for a description of level 2 qualifications).

b. Intermediate skills: Employers report that the most intense skill shortages are currently in skilled trades (Hogarth et al 2002). This is despite the reduction in the number of such jobs and is due to replacement demand arising from ageing of the workforce. Many people in these qualifications currently only have qualifications at level 2 or lower and this means that compared to Germany, where their equivalents are more likely to have had the equivalent of level 3 (or even sub-degree level 4) training, workers are less productive (Mason et al 2002). Associate professionals also have a high level of current skill shortages and they include some of the occupations projected to be the biggest areas of growth (e.g. social welfare, finance, health and IT) (IER projections 2000/01).

c. Maths skills: People with A-level maths do better than those without, at all higher qualification levels. For example, young adults with A-level maths earn about 10% higher more than those with GCSE maths or lower. The high wage premium is due to the relatively small proportion of young people in the UK who acquire good mathematical skills. For example, less than 10% gain an A level in mathematics, compared to around 16% of young people in France and 27% in Germany gaining the equivalent qualification. This problem also arises in non-A level post 16 courses, where very few UK students take any maths other than basic numeracy.

21. Additionally, weaknesses in management skills are a problem. Whilst around 4.5 million individuals in the UK have significant management responsibilities (around 14% of the workforce), 36% of enterprises report that their managers are not proficient. Furthermore, Bosworth and Massini (2000) made the point that, whilst management is often considered a profession, it does not have the qualification standards of other professions. Employer Skills Survey data showed that 62% of professionals are qualified to first degree level or better, compared to only 18% of managers.

22. Porter (2003) argues that the key sources of competitive disadvantage in the UK are low investment in capital assets and innovation, competing less on unique value, and lower use of modern management techniques. The finding was that where management skills were lacking, they were amongst lower and middle management.

And demand for skills needs to be stronger

23. At any one time, 8% of employers (and nearly a quarter of large employers) report live vacancies that are difficult to fill because they cannot get the people with the right skills. In addition, nearly a quarter (23%) of employers report internal skill gaps, where employees lack the proficiency to do their current job properly (Hillage et al 2002).

24. And "skill shortages" are only the tip of the iceberg. As discussed below (especially from paragraph 64), there appears to be a vicious circle of low skills, low wages, and consumer

demand for cheap products and services. Combined with low employer ambition in some parts, and management skill deficiencies (see paragraph 21), this leads to a sub-optimal demand for skills.

25. However, there are benefits for industry and firms from training. Dearden et al (2000) considered the effect of training at an industry level. They analysed data on training against a range of measures including valued added, wages, labour and capital, for a panel of British industries between 1983 and 1996. The study concluded that the effects of training on wages are only about half the size of the effects on industrial productivity and the pay-off firms take in higher profits from training is significant. Raising the proportion of workers trained in an industry by 5 percentage points is associated with a 4% increase in value added per worker and a 1.6% increase in wages.

26. Further, Keep et al (2003) conducted a literature review of returns to training at sector or firm level. Whilst the evidence was limited, some Irish and US studies of the different payback from general and specific training indicated positive effects from general training (although no significant effects for firm-specific training). The report also found some evidence showing that people management systems and product market strategies (which may include training) reap positive returns. As the Cabinet Office report, In Demand, concluded: "an effective way to stimulate demand for development in businesses is through encouraging greater ambition in the planning process, the adoption of best practice, and the pursuit of high value-added and innovative product strategies that need staff capable of delivering them".

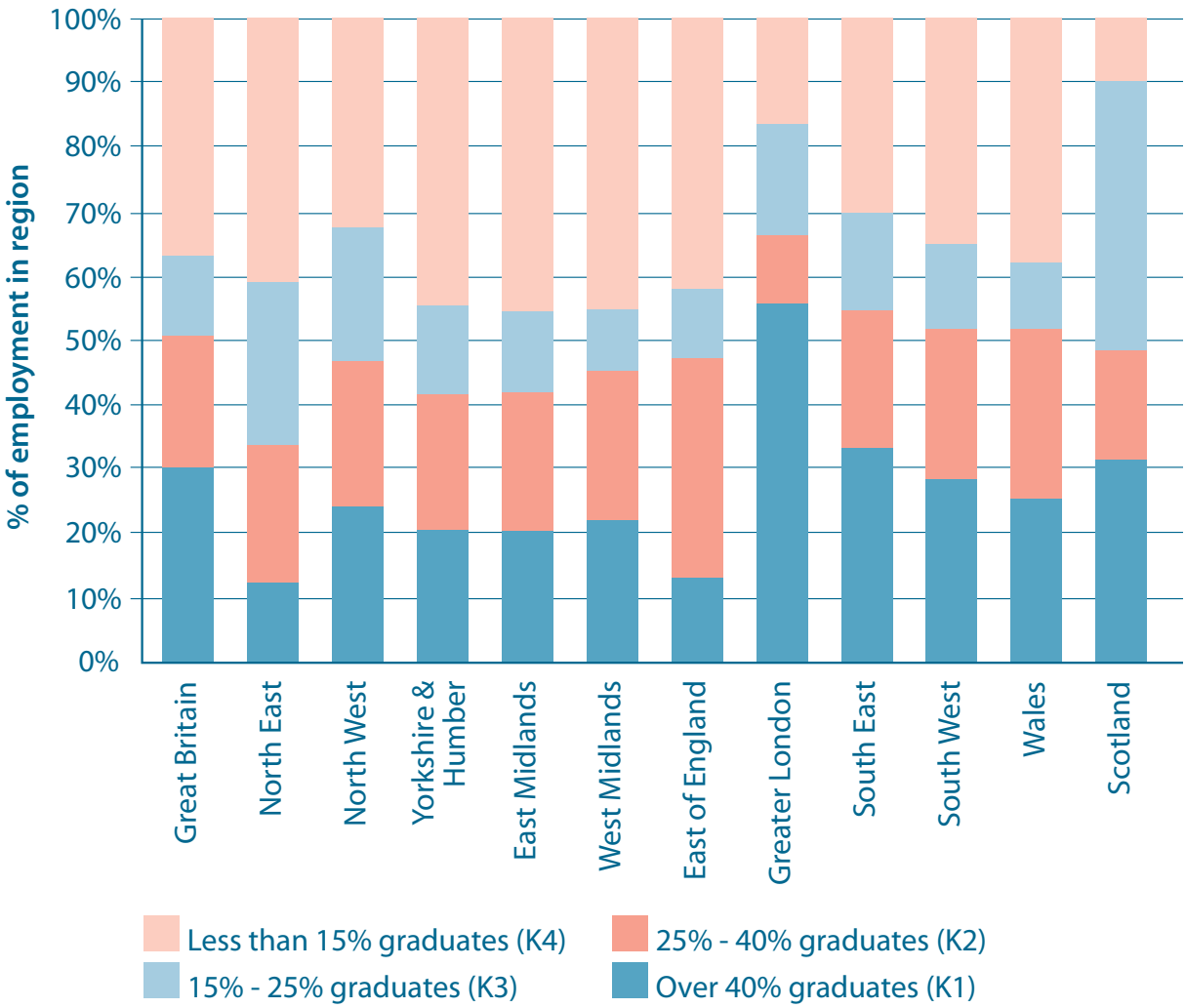
27. Hepworth et al (2003) and HM Treasury (2001) discuss the regional dimensions of the skills mismatch. Hepworth et al worked with RDAs to develop a model called "Regional Economic Architecture", which covers both the supply of and demand for skills. It uses employment and skills indicators to measure supply side drivers. For demand, the report categorises sectors according to the proportion of graduates employed (for example a 'K1' sector is one that has over 40% of its workforce as graduates).

28. Chart 8 overleaf summarises the distribution of employment across sectors with different "knowledge intensity" – for example, 30% of employment in Great Britain is in a 'K1' sector. It shows that there are wide regional differences in high knowledge sector employment. London's share of knowledge intensive employment is much higher than other regions. This difference is even more dramatic when the effects of public sector employment are separated out. London accounts for around 30 percent of 'knowledge intensive' business employment in Britain (i.e. private sector industries where graduates make up at least 25% of the workforce). In the majority of the regions, for example the North East and East Midlands, the business drivers of the knowledge economy are relatively weak, and the public sector (education, health etc) is the main 'knowledge intensive' source of employment.

29. Hepworth et al observe that, whilst there is a relatively distributed pattern of growth in qualifications and the graduate labour pool, job creation in knowledge-intensive industries is concentrated on London and the South East.

30. Skills have an important role in fostering innovation and this in turn is a key factor in driving up UK productivity. As the focus of UK competitiveness increasingly moves away from cost and towards innovation, the demand for higher skill levels to support higher value added product strategies will increase. It thus becomes important to look forward and recognise that the UK will see a general increase in the level of skills demanded.

CHART 8: Regional spread of employment across sectors according to knowledge intensity



(Source: Hepworth et al 2003)

ACCESS TO LEARNING IS UNEVEN

31. A comparison of training levels finds that the level of training in the UK is fairly solid (40% participated in job-related training in one year, compared to 40% in the US and 29% in Germany) (OECD 2002). An OECD report drawing on International Adult Literacy Survey data (O'Connell 1999) found that:

    a. Investment in training by employers in the UK is high: 82% of those surveyed undertook education and training paid for by employers, compared to 73% in the US, and an unweighted average of 68% across the 11 OECD countries studied.

    b. Self-financing of learning by individuals was low in the UK, with 19% undertaking a job related course they had paid for, compared to 29% in the US and an unweighted average of 37% across 11 OECD countries.

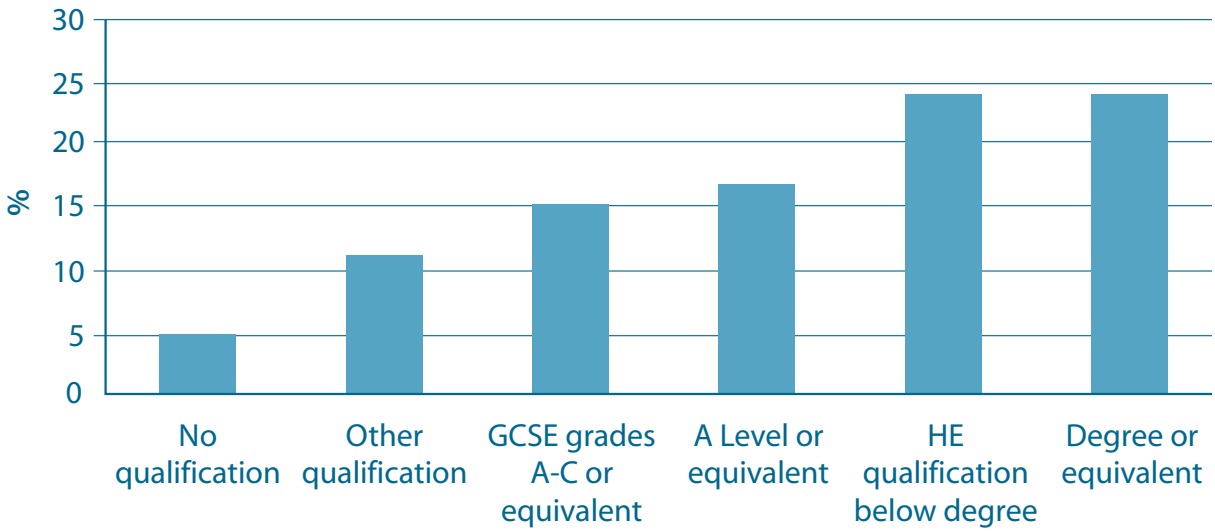
    c. Government financing of learning was around average, with 9% of people undertaking a job-related training course paid for by the Government, compared to 8% in the US and an unweighted average of 11% across 11 OECD countries.

32. As this shows, adults are heavily reliant on their employers to enable and provide for their participation in learning. NALS data shows three-quarters of all taught learning is job-related, with 60% of vocational taught learning provided by employers and a further 10% by professional organisations. Less than 20% is provided by FE, adult education, HE or school institutions.

33. However, this poses two problems. First, whilst employers do invest in training in the UK, survey data show it is typically short, specific, on the job learning. The UK's lower skill levels are partially a result of this wider spread of short duration courses, which do not build towards qualifications (the measure used in assessing skills gaps).

34. Secondly, access to training is considerably poorer for low-skilled adults and employees of small firms. People who missed out at school are unlikely to catch up later in life. Chart 9 below shows that only 5% of people lacking a qualification had received training in the past 4 weeks,

CHART 9: Percentage of employees receiving training in the last four weeks by highest qualification



(Source: Labour Force Survey, Spring 2001)

less than half the rate of those with other qualifications, and around a fifth of the rate of those with degrees. The National Adult Learning Survey 2001 found that, of those people who left school without a qualification, only 44% subsequently achieved a level 1 qualification, 5% obtained a level 2 qualification, 22% a level 3 or above.

This makes low skilled adults more vulnerable and less able to cope with changes in employment. 98% of jobs are closed to people with basic skills below entry level and 50% of jobs are closed to people with basic skills below level 1. Low skilled adults are more likely to be unemployed or inactive.

35. Smaller businesses are less likely to train their staff. 56% of employees in firms with fewer than 25 employees had undertaken taught learning in the past 3 years, compared to 67% of those in firms of 25-499 employees, and 71% of those in firms of 500+ (NALS 2001). This pattern holds true for all forms of learning measured (self-directed, vocational and non-vocational). This is partly explained by the diseconomies of scale that small firms experience. Learning and Training at Work 2000 (an annual survey of employers about training in their firm) found that small firms spend more on training per employee, particularly for off the job training.

EVIDENCE ON PRIORITIES FOR PUBLIC FUNDING OF ADULT LEARNING

36. Government makes a substantial investment in education and training at all levels of the national qualifications system and the skills strategy will target improvements in skills at a number of levels ranging from basic skills to higher professional and management skills. However, in relation to the government's general approach to adult learning a key issue must be how public funding can be targeted to achieve maximum impact.

37. There are a number of arguments that suggest that some additional public funding should be disproportionately, but not exclusively, targeted on learning up to level 2 of the qualifications system and at adults who do not already have a level 2 qualification. The key arguments are as follows:

- adults without a level 2 qualification are least likely to receive training from their employer and to be able to finance their own learning;
- learning up to level 2 especially that focuses on general employability skills, often provides a necessary platform for further learning at higher levels;
- private returns to learning are likely to be higher in relation to social benefits for skills at higher levels;
- adults should take more responsibility for their own learning once they have achieved the minimum platform of skills for further learning.

38. It is important to note that none of these arguments implies that a level 2 qualification should be regarded as an end in itself for adult learners. Rather the argument is that public funding should play a greater role in supporting learning at level 2 and below (particularly for generic skills) and private funding should become more important at higher levels.

39. The following paragraphs detail some of the evidence on the direct employment and earnings benefits of gaining a level 2 qualification and the extent to which level 2 qualifications can act as a platform for progression to higher levels of skill.

40. The probability of being employed is estimated to increase by 10 percentage points for men and 13 points for women with GCSEs/O levels. For level 2 NVQs, the probability of being employed increases by 10 percentage points for women, but only a negligible amount of up to 3 points for men (Dearden et al 2000).

41. Whilst average wage returns to NVQ at level 2 are small, there is variation across the range of different level 2 qualifications, and it will be important to distinguish those that provide better benefits and to understand why that is so. Although investment in learning is worthwhile with level 2 qualifications as they stand, the evidence points to a clear need for a major improvement in programme and qualification design.

42. At level 3, the returns for academic qualifications are of a similar magnitude to those for level 2, and the return for level 3 vocational qualifications is lower at around 6% to 10%. Again the return is higher for individuals of lower ability. There are no employment benefits for A levels in addition to those for other qualifications held.

43. Most research on the returns to qualifications does not distinguish between qualifications gained when young and those gained during adulthood. The evidence available is set out in Vignoles et al (2002) analysis using the National Child Development Study, a longitudinal panel of individuals born in 1958. It finds that adults (aged 33 to 42) who undertook lifelong learning were more likely to be in employment, and that successful

completion of qualifications led to more study ("learning leads to learning"). Wage effects were strongest for those who had no qualifications at the start of the period, with only limited evidence for other groups. However, this research necessarily reflects what have hitherto been low rates of adult employees acquiring vocational qualifications backed by an employer. Significant evidence is emerging from Jobcentre Plus' New Deal programmes, and LSC specific targeted programmes since 2000, that the public, employer and individual rate of return from vocational level 2 linked to an employer commitment to a job or progression can produce high rates of return if properly targeted and supported.

Can level 2 attainment lead to level 3?

44. Level 2 can be seen as the platform for employability. It is the level which compulsory schooling aims to reach (5+ good GCSEs). The great majority of young people are expected to have reached level 2 by age 19 - the 2002 target is 85%. Employment rates are higher for those with qualifications than for those without, but do not seem to increase much as the level of qualification increases.

45. Meanwhile general surveys of attitudes show that those with level 2 qualifications are more positive about learning than those below level 2, and even more than those better qualified. Around 45% of those with level 2 who have not studied within the past 3 years claim nothing would encourage them to learn. This compares to 71% for those with no qualifications, 58% with level 1 and 56% with level 3+ (NALS 2001).

46. We must be careful about what conclusions we can draw from this, but it may be that those at level 2 are more encouraged by the financial returns of the next stage qualifications. This would imply that more Government intervention is needed to encourage people to achieve level 2 (as they will then tend to take more responsibility for, and invest more heavily in, their own learning) than is needed to increase the qualification levels of those already at level 2.

PROBLEMS LEADING TO THESE SKILLS DEFICIENCIES

There are externalities from training that lead to under-investment in skills

47. There will be externalities associated with training if benefits accrue to people or firms (or society) who have not paid for that training. Where externalities exist, the ideal level of training for the economy would be higher than the individual and/or firm would be willing to pay for because they will not take account of these wider benefits to society. By their very nature, externalities are hard to identify and measure – figures that we can calculate (e.g. social rates of return) exclude externalities. Whilst this section describes available evidence, there is a clear need for further work on the feasibility of measuring externalities.

48. In terms of sector-wide benefits from training, a number of studies have found that employer-provided training acquired in earlier jobs is portable. In the UK, it was found that on-the-job training with a previous employer gave similar rates of return to men than if they had trained with their new employer. Transferability of training is diminished when new jobs are found in industries characterised by high rates of technological change (Blundell et. al. 1996, Lillard and Tan 1992). The Dearden et. al. study (2000) (see paragraph 25) also points towards the existence of externalities that are shared across the sector.

49. In terms of social benefits from learning, it appears that the benefits are widespread but subtle and interwoven with other effects. The Centre for Research on the Wider Benefits of Learning has published a series of reports on this issue, using a mix of qualitative and quantitative techniques. The emerging view is that learning, as well as improving 'human capital', improves social capital and personal improvements. Two quantitative reports have been produced, which predict significant reductions in the economic cost of crime and health (in particular, depression) as a result of acquiring qualifications.

There is more evidence of a fear of poaching than actual poaching

50. Poaching is a particular type of externality related to workforce training. It is argued that employers will not provide the optimal level of training, because, once trained, employees can poached by employers who can afford to offer higher wages (since they did not have to pay for the training).

51. As with other forms of externality, this effect is very difficult to measure. The primary counter-argument is a theoretical one – that employers and individuals will share the cost of training according to who is able to capture the benefits (individuals may do this through accepting lower wages) (e.g. see OECD 2001, Stevens 1999). So employers invest in firm-specific skills, and a level of general skills that they believe they can 'capture' due to the significant labour market imperfections that exist. Individuals will invest in general skills.

52. The limited evidence suggests this is fairly minor, and to the extent that poaching is a factor in firms' decisions about whether to invest in training, it is the fear of poaching rather than poaching that drives this. Kitching and Blackburn (DfES, 2002) surveyed a representative sample of 1005 firms in England with 2-49 employees. Less than 1% of employers reported a fear of trained workers being poached as the most important barrier to training. In fact, the majority of employers cited their main reason for not providing more training for existing workers as simply seeing no need or perceiving no benefits to doing so. For half the sample, there was no perceived need for more training and this was reflected in their "most important" reason for not doing more training. But, there is a caveat to these figures. If employers had already chosen to avoid training strategies, they would not fear poaching, which could also explain the low level of reported concerns.

53. Furthermore, labour turnover does not appear to reduce provision of training, and there is some evidence that training aids labour retention (Dearden et al, 1997). Using National Child Development Survey data, the authors show that for men, receiving work-related training significantly decreases

the probability of moving jobs over the following year by, on average, 1.0 percentage point. If the training is funded by the employer, then the probability of moving jobs in the next year is decreased by an average on 2.9 percentage points. For women, the effect of training is much smaller and not statistically significant. The authors obtained very similar results using Labour Force Survey data.

54. In a sense, large firms will be less worried by the possibility that qualified staff will move to jobs elsewhere because they are better placed to offer progression within their firm. For employees of small firms to progress, they are more likely to need to move to a new firm.

55. Employers may also be more concerned about poaching in low-skilled industries. The lower skilled are much more likely to undertake job-related learning with a view to changing jobs than the higher skilled. Just 11% of professionals and managers undertaking job-related taught learning do so to get a new job compared to 26% of the semi-skilled and 56% of the unskilled (though the sample size of the latter was small) (NALS 2001).

Individuals and small firms find it hard to finance learning

56. Individuals or firms may not be able to invest in skills at the most efficient level, because skills do not provide collateral for a loan in the same way as physical capital (i.e. capital market failure). This only becomes a problem where cash or alternative collateral are not available – i.e. individuals on low incomes, and small firms working within tight margins.

57. Also, skills are an inherently risky investment, and the risk to an individual or firm (and hence the cost of borrowing) is greater than the risk to society. This would mean that, even where there was no barrier to capital, people might under invest in their learning. In Kitching and Blackburn's survey of firms with 2-49 employees (DfES, 2002), where specific barriers to training were stated, cost was the most important: "Lost working time while workers are being trained" (12%) and "Financial cost of external training" (16%). And for individuals, NALS 2001

showed that only 38% of people with a household income of £10,399 or below were participating in taught learning, compared to 80% of those with income above £31,200.

Low participation in training is also a result of motivation

58. In addition to individuals citing the affordability of learning, a significant problem is that some people are not interested in it; and those with the lowest skill levels are also the least interested. 71% of those with no qualifications who have not studied within the past 3 years claim nothing would encourage them to learn (NALS 2001). This compares to 58% with level 1, 45% with level 2, and 56% with level 3+. People with low skills are likely to have had negative experiences of learning in the past that must be overcome before they are willing to undertake new qualifications (and may lead them to underestimate their own ability to learn).

59. We also know that individuals value flexible learning (at the right time, place and relevant to needs), advice, and support (with childcare, for example).

Information provision needs to improve

60. Better information can help address weaknesses in skills by reducing mismatch between the supply of skills and employer demand, motivating people to learn (particularly the unemployed and economically inactive), and improving knowledge. The need for a comprehensive and impartial source of information to inform learning choices provides the case for Government intervention.

61. Whilst Government does intervene in this way, there are gaps in information provision. A quarter of those surveyed in NALS 2001 said that they did not know about learning opportunities locally, and 10% said that they did not know where to go to find out about a course. Further, the most common source of advice was an employer (31%), which raises issues for people not in employment, and about access to impartial information.

62. The UK system has several weaknesses in terms of the range of information available, and the agencies used to provide that information. There is no single set of information available

about skills in demand in the local labour market. Each agency (e.g. SSCs, Jobcentre Plus, education providers) offering advice will use a mix of national statistics and their own databases. Information about provider quality is also uneven, and not readily accessed from a single source.

63. A further use of information that is often cited is persuading people (and employers) of the benefits of investing in training. Whilst this is important (and should continue to happen), we must not forget that employers and individuals make choices about skills predominantly using their own experience and information. For example, an employer is more likely to be interested in what similar firms tried or what they did in the past (Guest et al 2001).

Some sectors and regions are in low skill equilibrium

64. The existence of low skill equilibrium has already been argued in several Government publications (for example HM Treasury 2002, or Performance and Innovation Unit 2001). This is the theory that, due to adaptation over a number of years to the poor availability of skills in the workforce, UK companies are often in more basic, less customised and less skill intensive products than their competitors overseas. This has reduced the incentives for individuals and employers to acquire skills, thus becoming self reinforcing.

65. As described above for externalities, it is extremely difficult to test the existence of a low skilled equilibrium empirically. However, we believe that this theory provides the best explanation about why, despite the clear returns to skills and training described above, low skills strategies persist across some sectors and regions of the UK economy.

66. It may be that some sectors of the economy are more able to survive within a low skilled equilibrium than others. These would be sectors less open to global competition and more able to maintain and rely on a secure domestic market. Under these circumstances a demand for relatively low-value added goods from the domestic market would go hand in hand with firms delivering those good at low cost. This low cost would be achieved through low wages which in

return would maintain a high level of demand for low-value added products as workers would also be consumers. It is widely perceived that large sections of the UK clothing, building and hotel and catering sectors are characterised by this type of model. The longer term sustainability is highly dependent on this low cost, low value added market not being captured by foreign imports able to compete on low price. It may also be that the quality of management and the culture within an industry work as a brake on skills investment.

Vocational pathways are poorly articulated

67. The system for meeting the skills requirements of craft jobs and technical jobs that are below professional level is not well articulated. The system has three tracks: apprenticeships; occupational courses in further education colleges up to level 3; and vocational degree and sub degree courses.

68. The Modern Apprenticeship (MA) programme and the relevant frameworks were designed by employers, originally through National Training Organisations and now through Sector Skills Councils. Each comprises: an NVQ (at Level 2 for Foundation MA and Level 3 for Advanced MA); key skills at the appropriate level; and technical certificates. This combines vocational competence, generic skills and underpinning knowledge and understanding. Between 21% and 22% of the cohort currently participate in an MA by age 22.

69. In 2000/01 23% of 17 year olds in further education funded by the then Further Education Funding Council were enrolled full time in non-academic qualifications (other than GNVQs) – courses that are overwhelmingly vocational in nature. There is no framework agreed with industry such as exists for MAs that defines the broader learning programmes that students taking up occupational courses in FE colleges should be following. A diverse range of NVQs and other vocational qualifications is on offer. This makes it harder to explain these options to young people and their parents making choices about learning.

70. Standards of achievement in the MA and vocational FE options need to be raised. In 1999/2000, 50% of Advanced and 40% of Foundation MAs left with a full L3 / L2 qualification respectively and only one-third achieved the full framework. Variable standards are an obstacle to developing the status of the vocational offer.

71. Higher education provides many vocational programmes, including professional courses. Participation in courses such as computing, business and management studies and nursing has been increasing, and many graduates from these subjects enter technical and associate professional jobs - 50% in the case of computing and creative arts and over 90% in nursing. Overall, between 1995/96 and 2000/01 the proportion of first degree graduates entering technical and associate professional jobs rose from 35.5% to 39.7%.

72. The system of vocational learning as a whole therefore delivers higher levels of participation than consideration of any one of the three elements alone would suggest. However, it is poorly explained and understood, suffers from variable quality and, in the case of FE and HE options, there is insufficient assurance that young people gain appropriate work experience or are following programmes that meet the needs of industry. Nor have we articulated clear opportunities to progress from one learning programme to another.

Government needs to raise provider effectiveness

73. Success for All sets out the need for provider side reform. Past funding models may have discouraged innovation (in the range and variety of provision and in the use of new methods of delivery), failed to incentivise mid-range performers to strive for excellence, and encouraged continuing provision in areas that no longer meet national or local strategic needs.

74. The success rate for level 2 qualifications undertaken by adults taught in general FE colleges was 49% in 2000/01. Furthermore, of the 165 FE colleges inspected by the Adult Learning Inspectorate between April 2001 and March 2003, 39% were

satisfactory, 47% required partial re-inspection and 14% full re-inspection. Some curriculum areas were stronger than others, with the proportion of good or better grades ranging from 32% (in Construction) to 69% (in Visual and Performing Arts and Media). Similar issues arise for inspection of work-based learning, Ufi **learndirect** services, and the quality of employees responsible for supervising trainees in the workplace.

75. Evidence on responsiveness of provision is drawn from learner and employer satisfaction surveys. Whilst the LSC learner satisfaction survey (2001/02) found that 90%+ of learners (in FE colleges, Work-Based Learning, and Adult and Community Learning) were very or extremely satisfied, employer satisfaction seems lower. Employer views are less well researched, but in the CBI Employment Trends Survey 2000, only 35% of members who responded rated FE colleges good or excellent, compared to 62% for private training providers. The CBI did not publish these results from the 2001 survey, but we understand they have risen to 38% and 76% respectively. The LSC are conducting a survey of 70,000 employers which will report in August 2003. These results suggest that employers in particular are seeking more influence over the shape and content of provision, especially in FE colleges.

THE GOVERNMENT HAS A RANGE OF WAYS IT COULD ADDRESS THESE GAPS…

76. Government has a wide range of levers at its disposal in addressing intermediate skills gaps, and the options for action are set out in the Skills Strategy Progress Report. This section very briefly sets out the link between the problems described above, and the proposals in the Progress Report. It merely sets out how the Government can use the major interventions available to it to address each problem described above. There is not scope in this report to cover the complex and wide ranging debate about the suitability of each instrument.

77. The underlying assumption of this section is that Government action on skills must be to supplement (not replace) employer and individual action

– through subsidies and/or regulation that encourages learning, and through information, quality assurance and qualifications that support investment decisions.

78. **Government subsidies** are most appropriate for addressing economy-wide externalities, and affordability barriers (due to social pooled risk being lower than individual risk). In these areas, we are attempting to shift demand towards the optimal level, by reducing the cost to the learner. Subsidies can also be used to target areas of low skill equilibrium. Because of the greater barriers they face, low skilled individuals and employees of small to medium sized firms should be the first target of any subsidy regime. There is a wide variety of ways in which Government subsidies can be delivered. The primary options are: purchase (or part-fund) services from providers; offer subsidies direct to learners (through Individual Learning Accounts or vouchers); or provide financial incentives to employers.

79. The most direct response to capital market failure is the provision of a **loans system**, either publicly administered, or on a commercial basis but with Government underwriting the loans. Loans can be means and asset tested, to restrict access to those most likely to suffer resource constraints. Loans can also be linked to other affordability issues by providing some degree of implicit subsidy (e.g. through interest rate holidays, through linking repayments to income, or through subsidised interest rates). Career development loans are the primary existing loan product available to adult learners. The scope for broadening their application is being considered as part of the review of the funding of adult learning.

80. Where the problem is one of external benefits within a group of people (or firms), but not across the whole economy, Government may choose to support **collective action** so that the cost of meeting the externality can be equally shared within the group. The main problems that this might address are the existence of sectoral externalities from training, and the existence of a low skilled equilibrium. Since both of these problems differ from sector to sector, the intervention

would also need to be sectoral. However, regulation would be a relatively expensive instrument, is typically used where large shifts in behaviour are required – the evidence on sectoral externalities and low skill equilibrium would have to be carefully weighed before such a step is taken. There may be ways in which a similar impact can be achieved more effectively in addressing externalities by incentivising voluntary collective action rather than by compulsion through regulation. The options are discussed in the Skills Strategy Progress Report.

81. Further, a right to time off could in principle be used to encourage individuals to participate in learning, since time to study is a barrier as much as cost. Here again, however, there are potential downsides in triggering avoidance behaviour which generate costs without securing the intended benefits.

82. **Administrative systems** can serve to increase demand for skills by improving the relevance of provision and qualifications, and by signalling demand to people making learning decisions. The key decision for the review is the extent to which a purely demand-led system (i.e. where provision is driven solely by numbers enrolling) can achieve this, or whether local area planning is a more effective means of accelerating the rate at which changes on the demand side are communicated through to the supply side. The way in which the system is administered will be critical if we wish to improve learner motivation, the articulation of the vocational route, and provider effectiveness. Success for All has already announced several areas for improvement.

83. Finally, there is a specific role for Government in improving information systems. As discussed above, this is in terms of frontline delivery (advice and guidance services), and in terms of the underlying information base to support good decisions about learning (provider quality, local labour markets).

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Annex: Definition of Level 2 Qualifications

The adult level 2 target is based on the National Learning Target definition of qualification level. This in turn is based on the QCA's National Qualification Framework. The result is a categorisation of approved qualifications into the levels 1 to 5 as defined for use by the Labour Force Survey. It is intended that the definition be reviewed, in consultation with the QCA, building on their current work which looks at the relative weight or 'size' of different qualifications at each level. The current LFS definition classifies qualifications as follows:

Level 1	▪ NVQ1 ▪ City and Guilds Foundation/ Part 1 ▪ RSA other	▪ BTEC First or General Certificate ▪ GNVQ foundation
Level 2	▪ NVQ2 ▪ City and Guilds Craft ▪ RSA diploma ▪ BTEC First or General Diploma	▪ GNVQ intermediate ▪ 5 or more GCSEs at grade A*-C
Level 3	▪ NVQ3 ▪ City and Guilds Advanced Craft / Part 2 ▪ RSA Advanced Diploma	▪ BTEC National ▪ OND/C ▪ GNVQ advanced ▪ 2 or more A levels
Level 4	▪ NVQ4 ▪ RSA Higher Diploma ▪ BTEC Higher ▪ HND/C	▪ First degree ▪ Teaching and nursing qualifications

Level 5	▪ NVQ5 ▪ Higher degree

Scottish and other qualifications are included at their equivalent levels wherever possible. Two important categories which are divided between levels are:

- Trade apprenticeships, which are divided 50% to level 2 and 50% to level 3
- 'Other qualifications' which are divided 55% to level 1, 35% to level 2 and 10% to level 3.

These are classified at an aggregate level, for example, an individual with an 'other' qualification is not personally allocated to level 1, 2 or 3. Thus for some analyses these qualifications are omitted.

It is understood that the 'other' qualifications are predominantly low level vocational and some foreign qualifications.